

In the Claims

The following Listing of Claims replaces all prior versions in the application:

LISTING OF CLAIMS

1. (Currently amended) A system for outputting a broadband signal, the broadband signal comprising a first plurality of channel streams, the first plurality of channel streams arriving at the system in a digital format, the system comprising:

a multiplexer configured to receive and distribute the first plurality of channel streams;
a plurality of modulator circuits configured to receive the first plurality of channel streams
and to produce producing a digital upconverted signal of each of the channel streams;
a summer circuit, coupled to the plurality of modulator circuits, for digitally summing the digital unconverted signals;
a DAC, coupled to the summer circuit, producing an analog signal from the digitally summed upconverted signal; and
an upconverter, coupled to the DAC, for upconverting the signal into another signal centered on a particular frequency.

2. (Original) The system of Claim 1 wherein the each of the plurality of modulator circuits outputs a single signal.

3. (Original) The system of Claim 1 wherein the upconverter is an IF modulator.

4. (Original) The system of Claim 1 further comprising:

a filter, coupled to the upconverter, to band limit the outgoing signal.

5. (Currently amended) A system for outputting a broadband signal, the broadband signal comprising a first plurality of channel streams, the first plurality of channel streams arriving at the system in a digital format, the system comprising:

a multiplexer configured to receive and distribute the first plurality of channel streams;
a plurality of modulator circuits configured to receive the first plurality of channel streams
from the multiplexer and to produce ~~producing~~ a digital upconverted signal of each of the channel streams;
a summer circuit, coupled to the plurality of modulator circuits, for digitally summing the digital upconverted signals;
a DAC, coupled to the summer circuit, producing an analog signal from the digitally summed upconverted signal;
an upconverter, coupled to the DAC, for upconverting the signal into another signal centered on a particular frequency; and
a transmitter, coupled to the upconverter, for outputting the plurality of summed signals to a receiver.

6. (Original) The system of Claim 5 wherein each of the plurality of modulator circuits outputs a single signal.

7. (Original) The system of Claim 5 wherein the upconverter is an IF modulator.

8. (Original) The system of Claim 5 further comprising:

a filter, coupled to the upconverter, to band limit the outgoing signal.

9. (Currently amended) A system for outputting a broadband signal, the broadband signal comprising a first plurality of channel streams, the first plurality of channel streams arriving at the system in a digital format, the system comprising:

a multiplexer configured to receive and distribute the first plurality of channel streams;
a plurality of modulator circuits configured to receive the first plurality of channel streams from the multiplexer and to produce ~~producing~~ a digital upconverted signal of each of the channel streams, each of the plurality of modulator circuits having a first and second outputs;
a first summer circuit, coupled to the plurality of first outputs of the plurality of modulator circuits, for digitally summing the first outputs of the modulator circuit;
a second summer circuit, coupled to the plurality of second outputs of the plurality of modulator circuits, for digitally summing the second outputs of the modulator circuit;
a first DAC, coupled to the first summer circuit, producing an analog signal from the digitally summed first outputs;
a second DAC, coupled to the second summer circuit, producing an analog signal from the digitally summed second outputs; and
an upconverter, coupled to the first and the second DAC, for upconverting the summed first signals and the summed second signals into another signal centered on a particular frequency.

10. (Original) The system of Claim 9 wherein the upconverter is a quadrature modulator.

11. (Original) The system of Claim 9 further comprising:

a filter, coupled to the upconverter, to band limit the outgoing signal.

12. (Currently amended) A system for outputting a broadband signal, the broadband signal comprising a first plurality of channel streams, the first plurality of channel streams arriving at the system in a digital format, the system comprising:

a multiplexer configured to receive and distribute the first plurality of channel streams;
a plurality of modulator circuits configured to receive the first plurality of channel streams
from the multiplexer and to produce ~~producing~~ a digital upconverted signal of each of the
channel streams;
a first number of summer circuits, each summer circuit coupled to the plurality of modulator
circuits, for digitally summing an output of the modulator circuit;
a second number of DACs, each of the second number of DACs coupled to a summer circuit,
each DAC producing an analog signal from the digitally summed output of one of the
summer circuits; and
a second number of upconverters, each of the second number of upconverters coupled to the
number of DACs, for upconverting a signal from the DAC into an output signal centered on a
particular frequency;
wherein the second number is less than the first number.

13. (Currently amended) A system for outputting a broadband signal, the broadband signal
comprising a first plurality of channel streams, the first plurality of channel streams arriving at
the system in a digital format, the system comprising:

a multiplexer configured to receive and distribute the first plurality of channel streams;
a plurality of modulator circuits configured to receive the first plurality of channel streams
from the multiplexer and to produce ~~producing~~ a digital upconverted signal of each of the
channel streams;
a first number of summer circuits, each summer circuit coupled to the plurality of modulator
circuits, for digitally summing an output of the modulator circuit;
a second number of DACs, each of the second number of DACs coupled to a summer circuit,
each DAC producing an analog signal from the digitally summed output of one of the
summer circuits; and

a number of upconverters, each of the third number of upconverters coupled to the second number of DACs, for upconverting a signal from the DAC into an output signal centered on a particular frequency;

wherein the second number is less than the first number.